

REMARKS

Applicants hereby acknowledge the Office Action mailed on March 25, 2005. Applicants thank the Examiner for consideration of the application, and request re-examination of the present application in view of the following remarks.

Examiner rejected claims 1-5, 7, 8, 10, 12, 14-16, 18 and 20 under 35 U.S.C. § 112, second paragraph for a number of discrepancies. Applicants have amended these claims and believe to have overcome the examiners rejection.

On page 4 the Examiner objected to the term "transversely to the direction of insertion of the small components" in claim 7. Applicants disagree with the Examiners rejection as applicants have defined the "direction of insertion of the component" in lines 275-277 on page 8; have defined the term "transversely to the direction of insertion" in lines 305-310 on page 9; and have defined "perpendicularly to the direction of insertion" in lines 268-270 on page 8. Having described these details, Applicants believe that one of ordinary skill in the art would understand the definition and its relative scope.

Claims 1-4 and 18 stand rejected under 35 U.S.C. § 103(a) as being obvious in view of European Patent 0660655 issued to Matsuzoe. The Examiner asserts:

Matsuzoe discloses a transport system for small components, arranged in series comprising a chain having a plurality of chain links (2) in which the small components are accommodated in a accommodation cavity (1) within each chain link (2) the accommodation cavity (1) having at least 2 walls where 1 wall is rigid (See Figure 1 or 2, either 13 or any of the L-shaped members within the inner walls where the small component is seated), a central web (center of 13) extending in the direction of insertion of the small components, having arms (both ends of 13) laterally extending there from and extending over the full height of the accommodation cavity (1) thereby corresponding to the height of the small components and the outer ends of the arms each have a bead directed towards the inside (see Figure 2). Matsuzoe also discloses the arms having their upper ends being freestanding, the outer rigid wall having a slope (see Figure 1), the accommodation cavity (1) having a through opening (17), the chain links (2) are made by plastics injection molding (column 1 lines 41-46 and 53-55) and were in the chain links (2) have different accommodation cavities for different components or component stages (column 4

lines 65-67). Matsuzoe also discloses chain links 2 being pivotable about pins 6a transversely or perpendicularly (please refer to Figure 8) to the direction of insertion of the small components in the accommodation cavity (1) and where in the chain links (2) on one side have 2 lateral arms (5) with bores (5a) and on an opposite thereof, have two lateral arms (6) with axle-type projections (6a) whereby the axle-type projections latchingly engage the bores upon assembly of the chain links.

The Examiner admits Matsuzoe fails to disclose orientating the resilient wall opposite the rigid wall. However, the Examiner believes it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the wall arrangement of Matsuzoe's invention with that of Forster's (U.S. Patent 6,273,253) resilient wall, thereby arranging the resilient wall opposite to the Matsuzoe's rigid wall to provide for a range of different size components as well as to provide for a more secure holding arrangement of the small components while they are being conveyed. Applicants respectfully disagree.

Applicants invention is quite different from that of Matsuzoe. Firstly, Matsuzoe's invention is to provide for an interconnection to such a device as an integrated circuit body B as shown in Figure 6 having a plastic central body portion with electrical leads extending outwardly from both sides. This body portion is shown in cross section in Figure 5 where the body portion B rests on two L-shaped shoulders (which are also shown in top view in Figure 2). However the body portion B never contacts the side rocking plates 13. Rather, as shown in cross section Figure 5 the leads extend over the L-shaped shoulders and below pawl 16 to hold the circuit chips in place. Furthermore Matsuzoe's chip body B can only be removed if a dog 19 (as best shown in Figure 4) is moved to the position to move the locking pawl 16 from a position above the lead (Figure 5), whereby robot arms can grip the chip body as explained in column 4 lines 35-38. Thus, Matsuzoe (in the embodiment of Figures 1-8) shows a system for holding a defined sized integrated circuit chip and having moveable walls 13 that rotate about hinged parts 12 by way of dogs 19 contacting contacts 15. The pawls 16 hold the chip in place by contacting tops of the integrated circuit leads as shown in Figure 5 and therefore nothing holds the body portion of the integrated circuit chip.

In applicants invention, a chip is inserted into the opening 3 such that it contacts a rigid wall on one side and resilient wall 6 on the opposite side. There is no contemplation of contact with a rigid wall in Matsuzoe. In fact it is absolutely contrary and inconsistent with the teachings of Matsuzoe to provide such a rigid wall. The purpose of the resilient wall in applicants invention as explained therein is to urge the chip against the rigid wall. More particularly on page 6, line 209 applicants indicate that "by means of the beads 11 on the resilient arms 9, the small component 4 thus is urged against the opposite rigid wall 5 and fixed. The resilient arms 9 as wells as the beads 11 extend over the full height of the accommodation cavity so that the small component to be accommodated can be fixed at all levels."

Thus Matsuzoe does not show a device where the chip is urged against any rigid wall. The Examiner has indicated that it would be obvious to one of ordinary skill in the art to take one of the resilient members 28 of Forster and add that to Matsuzoe so as to form a rigid wall and a resilient wall combination. Applicants believe that this is absolutely contrary and inconsistent with the teaching of Matsuzoe. In fact in order to achieve this device as explained by the Examiner, Matsuzoe would have to remove both its hinged walls 13 together with the pawls, and add one of the resilient walls 28 from Forster to the carrier of Matsuzoe. This is a total hindsight reconstruction of Matsuzoe and is absolutely contrary to its teachings. Matsuzoe does not teach frictional engagement of the chip housing body with the carrier but rather, gripping the leads.

Matsuzoe also has second and third embodiments, Figures 9-11 and Figures 12-17 respectively, showing a different type of pawl 16. However in each case it is clear that the intention of the pawl 16 is to overlie the device with retentive force, and that the pawl must be moved, to move the device out of the carrier. With respect to the embodiment of Figure 9, the specification indicates that dogs 19 must move the contacts 15 in order to pivot pawls out of the way to remove device B'. And in the embodiment of Figure 12, Matsuzoe indicates that "with the locking pawls 7c clicking over the chips corner edges, the elastic feet 7a return to their upright position so that the pawls hold the IC chip B in place." (Column 6 lines 45-48).

Moreover, the overall intent of Matsuzoe is to provide a retentive engaging force with the chip, not merely frictional engagement. As indicated in Matsuzoe's specification column 7 line 49, in a summary of all the embodiments, Matsuzoe indicates that "retention of said articles is effected in the present invention not by a simple friction of elastic members urged towards the articles, but by a mechanical engagement of the lock pawls therewith." Furthermore, applicants believe that the rejection by Matsuzoe is inconsistent with the teaching of the present invention and that any modification to Matsuzoe by the Examiner in an obviousness rejection, or in a combination with the use of Matsuzoe in another reference such as Forster, is a hindsight reconstruction of Matsuzoe which is inconsistent with Matsuzoe's teachings. For all the above reasons, applicants believe that present claims 1-18 and 20 are in condition for allowance and respectfully request early passage thereof.

On page 12 of the Office Action the Examiner indicates that, and in response to applicants' previous argument that Matsuzoe does not render the claims obvious, the Examiner indicates that he would like to point to Figure 5 in Matsuzoe. The Examiner indicates that he is relying on either reference member 13 or the L-shaped member which can be seen in Figure 1 to the right of reference numeral 13 as meeting the limitation of a "rigid wall". Firstly with respect to numeral 13, this could not possibly be a rigid wall as this wall moves. It is specifically indicated in the specification, and as shown in Figure 4 that this wall moves about hinged wall 12, which acts as a fulcrum to move the entire wall 13 from a position shown in Figure 2 to the position shown in Figure 4 to release the integrated circuit chip.

With respect to the L-shaped member which is shown in Figure 1 to the right of the reference numeral 13, this also could not be interpreted as a rigid wall as explained in applicants application. As shown in Figure 5 this L-shaped member is merely a nesting component to locate the chip body such that the leads overlie the L-shaped members to position the leads in place for the pawls 16 to overlie the leads. Moreover if one were to use this L-shaped member as a rigid frictional wall, the resilient wall would have to be located opposite to this L-shaped member, and this could not be done with the integrated circuit chip having leads extending out of both sides as shown in the chip in Figure B. No

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resilient wall could push against the opposite side with the leads in place and retentively hold the chip in place.

In summary, nothing in Matsuzoe would suggest adding the resilient wall to urge a chip against a rigid wall, and as pointed out in numerous places the Matsuzoe specification is inconsistent with that modification or combination and is a hindsight, contradictory reconstruction of Matsuzoe.

Claims 1 and 18 of the present application now require that the resilient wall urge the small component toward the rigid wall. Matsuzoe does not teach this limitation in any manner. Accordingly, Matsuzoe does not render either claim 1 or claim 18 obvious under 35 U.S.C. § 103(a), and thus, Applicants assert claims 1 and 18 are allowable over the prior art. Moreover, as the remaining claims ultimately depend from claims 1 and 18, Applicants believe all pending claims are in condition for allowance. Thus, Applicants respectfully request passage thereof.

If necessary to effect a timely response, please consider this paper a request for an extension of time, and charge any shortages in fees, or apply any overpayment credits, to Baker & Daniels' Deposit Account No. 02-0387 (72262.90014). However, please do not include the payment of issue fees.

Respectfully submitted,

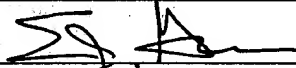


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